

REMARKS

Claims 1-23 remain pending in the present application as amended. All claims have been rejected. Claims 1, 10, and 19 are independent and have been amended. No claims have been added or canceled. Applicants respectfully submit that no new matter has been added to the application by the Amendment. In particular, the additional language in the claims regarding the consolidation performed by the context service may be found in the published application at least at paragraphs [0054]-[0057].

Telephone Conversation With Examiner

Examiner Liu is thanked for the telephone conversation conducted on June 15, 2009. The rejection under 35 USC § 112 was discussed. Proposed claim amendments were discussed. Examiner Liu asked for an explanation of how the specification supported the proposed claim amendments directed to different metadata attributes describing different service entities. Examiner Liu also noted that the proposed consolidated set of metadata attributes was not tied to the step of determining that an action is available. Although no agreements were reached as to whether the proposed amendments overcome the rejections based on the cited art, Examiner Liu indicate that a new search would probably be warranted.

Response To Examiner

In response to Examiner's request during the aforementioned conversation, with regard to different service entities, Applicants respectfully point the Examiner's attention to paragraph [0036] of the published application where it is stated with regard to Fig. 2 and by extension Fig. 5 that service entities 215a' and 215b' [each of which is associated with a different application service 210a, 210b] may be non-related [i.e., different] service entities that are specific [again, i.e., different] to each [of] component processes 300a [of Fig. 3a] and 300b [of Fig. 3b], respectively. With regard to different metadata attributes [of the different service entities], Applicants respectfully point the Examiner's attention to paragraphs [0037] and [0038] of the

published application where it is shown in paragraph [0037] metadata attributes for exemplary entity 215a and where it is shown in paragraph [0038] different metadata attributes for exemplary entity 215b.

In response to Examiner's comments about the metadata attributes not being tied to the step of determining that an action is available, Applicants have amended the independent claims to recite that determining that an action is available occurs with reference to the consolidated set of metadata attributes. Support can be found in connection with steps 716-722 of Fig. 7 and is set forth in more detail in the application as published at paragraphs [0073]-[0076].

Claim Rejection - 35 U.S.C. § 112, 2nd Paragraph

The Examiner has rejected the claims under 35 USC § 112, second paragraph. Applicants respectfully traverse the § 112, second paragraph rejections insofar as it may be applied to the claims as amended.

According to the Examiner, the limitation of a metadata attribute describing a 'format of data processed by' a service entity is not supported in the specification. Without prejudice or disclaimer, Applicants have amended independent claims 1, 10, and 19 to recite a metadata attribute describing a 'format of data of' such a service entity'. Such a metadata attribute is set forth in the application as filed at least at paragraphs [0037] and [0038] (as published). Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 112, second paragraph rejection.

Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected claims 1-6, 8-16, 18, 19, and 21-23 under 35 USC § 103 as being obvious over Tracey et al. (U.S. Pat. Pub. No. 2003/0083917) in view of Evans et al. (U.S. Pat. Pub. No. 2004/0019560), and the remaining claims, all of which are dependent, under 35 USC § 103 as being obvious over the Tracey and Evans references in view of Brendle et al. (U.S.

Pat. Pub. No. 2005/0021355). Applicants respectfully traverse the § 103 rejections insofar as they may be applied to the claims as amended. In particular, Applicants respectfully submit that the cited references in general and the Tracey reference in particular do not disclose or even suggest the use of a context service that matches the first and second entities by cross-referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, that consolidates the matched first and second service entities into a single consolidated context entity, and that consolidates the first and second metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity, as is now recited in independent claims 1, 10, and 19.

As was previously pointed out, the present application is generally directed to integrated management of different service entities in connection with respective different application services. One particular scenario (among many) in which such a situation arises is where a loan approval computer system has a first application service that is a "credit history" component and a second service that is a "down payment" component. Thus, each application service may be considered to perform an overall function by way of a set of actions.

Each of the two application services operates with respect to respective different data service entities. Thus, the credit history application may operate on a service entity that is a record of a request for a credit history for a particular individual, while the down payment application may operate on a service entity that is a record of an individual who has paid or will pay a down payment. Each service entity, then, may be a collection of data organized into a record according to a predetermined format. Although the data in each type of record / service entity may be similar, it should be understood that the similar data may be organized differently in each type of service entity, i.e. according to a different set of metadata attributes. For example, the metadata attributes for one service entity associated with a first application service may require that a name be specified as a full name such as "John Smith", while the metadata attributes for another service entity associated with a second application service may require that

the same name be specified by a first name such as “John” and a last name such as “Smith”. As should be appreciated, such differing attributes are not of particular concern as long as a particular service entity is operated on only by a corresponding application service. However, and as should also be appreciated, such differing attributes are a significant impediment to integrated management of service entities across application service boundaries.

To enable integrated management of service entities that operate on similar data but employ differing metadata attributes / data formats to describe the data, a context service is provided in the present application, where the context service matches the first and second service entities despite having the different metadata attributes. That is, the context service recognizes that despite the different metadata attributes, each service entity operates on the same or similar data. Thus, the context service provides a ‘road map’ by which an action that affects one service entity can also be employed to modify another related service entity if appropriate. As but one example, performing an action to mark a credit history service entity as ‘bad’ can also cause an action to mark a related down payment service entity as ‘return’, even though the service entities are (expected to be) controlled and maintained by differing application services.

Each of independent claims 1, 10, and 19 recites that a first service entity is associated with a first application service, a second service entity is associated with a second application service different from the first application service, the first service entity of the first application service has first metadata attributes associated therewith, the second service entity of the second application service has second metadata attributes associated therewith, the first metadata attributes describes a format of data of the first service entity and the second metadata attributes describes a format of data of the second service entity, the first metadata attributes of the first service entity are different from the second metadata attributes of the second service entity, and a context service matches the first and second service entities despite the different first and second metadata attributes thereof.

As amended, each of claims 1, 10, and 19 also recites that the context service matches the first and second entities by cross-referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, that the context service upon matching the first and second service entities consolidates the matching first and second service entities into a single consolidated context entity, and that the context service also consolidates the first and second metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity.

Applicants again note that the Tracey reference teaches a database system with bin records, each of which is the same exact table format, and thus based on the same metadata attributes. Applicants respectfully submit that the Tracey data in the bins table 200 of Fig. 3 is not exemplary of different metadata attributes in the manner recited in independent claims 1, 10, and 19, especially inasmuch as all of the data in such bins table 200 is formatted according to a common data format / set of metadata attributes. That is, each record (i.e., a row in the table 200) includes an entry for a common set of attributes / data types as represented by the columns of the table 200.

Applicants respectfully submit that the Tracey reference does not disclose or even suggest that a service entity of an application service corresponds to each table, and that each service entity is associated with a separate application service, and that a context service matches first and second service entities despite different first and second metadata attributes thereof and the service entities being associated with different application services, as is recited in claims 1, 10, and 19. Applicants also respectfully submit that the Tracey reference does not disclose or even suggest that a context service should or could match the first and second entities by cross-referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, that the context service upon matching the first and second service entities should or could consolidate the matching first and second service entities into a single consolidated context entity, and that the context service should or could also consolidate the first and second

metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity, as is now recited in claims 1, 10, and 19.

The Examiner cites to the Evans reference primarily as disclosing the use of an extensible markup language to format data. Nevertheless, Applicants respectfully submit that the Evans reference like the Tracey reference also does not disclose or even suggest a context service that performs all of the functionality that is now recited in claims 1, 10, and 19. Moreover, neither references appreciate that by performing such matching it can be determined that an action is available to be performed based on a corresponding classification of the availability of the action for each of the matched first and second service entities, as is recited in claims 1, 10, and 19.

Thus, Applicants respectfully submit that the Tracey reference and Evans reference do not disclose or even suggest all of the subject matter recited in independent claims 1, 10, and 19 as amended. Accordingly, Applicants submit that such references cannot be applied to make obvious such claims 1, 10, and 19 as amended or any claims depending therefrom, including claims 2-6, 8-16, 18, 19, and 21-23. Moreover, inasmuch as such independent claims are unanticipated and non-obvious, then so too must all claims depending therefrom including all other claims of the application be unanticipated and non-obvious, at least by their dependencies. As a result, Applicants respectfully request reconsideration and withdrawal of the § 103 rejections.

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PATENT

CONCLUSION

In view of the foregoing Amendment and Remarks, Applicants respectfully submit that the present application including claims 1-23 is in condition for allowance, and such action is respectfully requested.

Respectfully Submitted,

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